



# JOINT TEST AND EVALUATION PROCEDURES MANUAL

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## FOREWORD

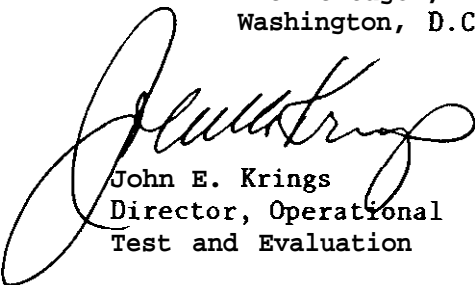
This Manual is issued under the authority of DoD Directive 5000.3 "Test and Evaluation, " March 12, 1986. Its purpose is to set forth the policy whereby the Deputy Director, Defense Research and Engineering (Test and Evaluation) administers the Department of Defense Joint Test and Evaluation (JT&E) program. This Manual provides a high level description of the joint test and evaluation process , describes the organizational framework within each Service which supports the JT&E program, and identifies principal participants and their respective responsibilities

This Manual is effective immediately, and is mandatory for use by all DoD Components .

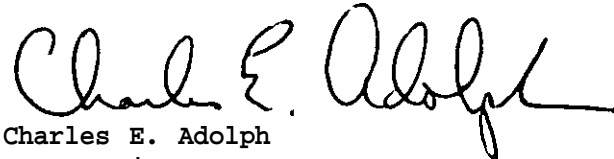
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OVERVIEW OF THE JOINT TEST AND EVALUATION PROGRAMA. PROGRAM DESCRIPTION

The Office of the Secretary of Defense (OSD) sponsors Joint Test and Evaluation (JT&E) programs to provide information required by the Congress, OSD, Unified and Specified Commands, or DoD components. The purpose of JT&E is to bring two or more Services together in order to evaluate technical or operational concepts; to provide information on system requirements and improvements; to examine systems interoperability in order to provide insight into necessary changes; to develop and analyze testing methodologies; or to evaluate technical or operational performance under realistic conditions of interrelated/interacting weapons systems. Models, simulation, and test beds are used in conjunction with field exercises to validate information and procedures .

This Manual provides guidelines for the nomination, selection, and chartering of JT&E programs. The guidelines represent a management structure designed to maintain the independent status of the JT&E program. Alternative management structures which achieve this independence are not excluded from consideration.

Joint tests are nominated by the Services, Commanders-in-Chief (CINCs) of the Unified and Specified Commands, the Joint Staff, or OSD agencies for consideration by a Senior Advisory Council (SAC) co-chaired by the Deputy Director, Defense Research and Engineering (Test and Evaluation) (DDDRE (T&S)) and the Director, Operational Test & Evaluation (DOT&E). The SAC reviews the nominations and recommends those candidates to enter into a feasibility study phase to ascertain the scope, cost, and general approach of the proposed test.

The feasibility study becomes the basis of the decision on whether to proceed. Services are tasked to form a Joint Test Force (JTF) with one Service designated as the lead for administrative and logistical support throughout the conduct of the JT&E. At the conclusion of the JT&E, reports are prepared by the JTF and briefed and distributed to agencies for their use.

B. NOMINATION AND SELECTION PROCESS

The process by which JT&Es are nominated and selected is described in the following paragraphs. Participants in the process and their specific responsibilities are described in Chapter 2.

1. The formal cycle begins each year when the DDDRE(T&E) issues a call for JT&E nominations to the Services, Defense Agencies, the Joint Staff, and the OSD staff. A nomination may be drafted at any time by any organization that recognizes an opportunity for the effective application of a JT&E. These nominations may be submitted along with others when the call for nominations is made. The format for a nomination is shown in Figure 1-1. A well-developed nomination should contain a statement of explicit issues to be addressed. The nominations must address joint test issues whose results will benefit more than one Service. The tests should have a duration of no more than two to three years. Of primary importance is a clear statement of test objectives and their potential impact upon DoD, the Services, the CINCs and the test community.

2. The Services and agencies make internal dissemination of the call for nominations and develop and refine nominations for submission to the DDDRE (T&E). A working level review of the nominations takes place prior to a meeting of the JT&E Planning Committee. At this time, the Joint Staff member of the JT&E Planning Committee may be asked to identify opportunities for the integration of suggested tests into the activities of joint exercises. In addition, the Joint Staff member may identify the Unified and Specified Commands that will be the users of the test results and assess the potential impact of the results on joint operations.

3. The JT&E Planning Committee meets to review the nominations, exchange Service positions, and prepare the nominations for presentation to the SAC.

4. The SAC convenes to review and consider the reports and recommendations of the JT&E Planning Committee. The SAC develops recommendations on which tests should be approved and whether a test should proceed under a charter or feasibility study. If a test is recommended from the point of view of issues and utility, but cannot be executed because of the unavailability of resources, funds, or test ranges, the test should be renominated by the interested Service or agency during the next cycle.

5. The SAC co-chairmen approve the nominations for execution as joint tests. The DDDRE (T&E) designates the lead and participating Services and directs the accomplishment of a feasibility study. Under the oversight of and with funding from OSD, the directed agent will conduct the feasibility study to further develop and refine the test concept, assess the feasibility of executing the test program, and recommend future courses of action.

SPECIAL NOT'S: The direction and conduct of a feasibility study does not necessarily imply a commitment to execute the test. The test may be chartered and executed if the feasibility study and the availability of resources support a decision to proceed. The need is paramount for objective scrutiny and assessment of the nomination that will permit an informed decision as to whether to proceed.

6. To accomplish the feasibility study, a staff may be drawn from the Services and their agencies. The Feasibility Study will be developed over the next four to six months. The staff's activities during this time may include the following:

- a. Developing a rigorous set of test issues and objectives;
- b. Conducting a literature search;
- c. Determining operational and technical JT&E requirements;
- d. Determining Service participation and resource requirements;
- e. Developing a Joint Consolidated Resource Estimate;
- f. Refining the funding requirements;
- g. Identifying suitable test locations and facilities;

h. Identifying opportunities to incorporate test activities into scheduled joint exercises;

i. Determining instrumentation and simulation requirements;

j. Identifying the existence and availability of suitable simulation models;

k. Establishing a test schedule with milestones ;

l. Defining the product of the test;

m. Developing a preliminary test design; and

n. Determining data collection requirements and evaluation methodology.

The results of these activities are incorporated into a feasibility study and a preliminary test design, and are organized for presentation to the JT&E Planning Committee, the Technical Advisory Board (TAB) , and the SAC. Detailed requirements for the feasibility study are in Chapter 3.

7. Upon completion of the feasibility study, the results are briefed to the JT&E Planning Committee and the TAB. It is expected that the Services and their respective Test Agencies will have already reviewed the feasibility study and rendered an opinion through their Service representative on the JT&E Planning Committee. The Services will also nominate candidates for Joint Test Director (JTD) and the Deputy Test Directors (DTD) . The JT&E Planning Committee and the TAB review and evaluate the findings and prepare recommendations for the SAC.

8. The SAC considers the results, findings, and recommendations of the TAB and the JT&E Planning Committee. It also considers Service support and budget constraints. From these considerations, the SAC develops recommendations as to which tests should be executed, and in what priority.

9. Based on SAC recommendations, the DDDRE (T&E) issues charters for the new JT&E's. The charter is direction for the JT&E to proceed with staffing, planning, execution, analysis, and reporting of the test. At this time, the JTD and DTDs will be selected.

JOINT TEST NOMINATION

- I. TITLE
- II. TEST OBJECTIVE-ISSUES TO BE ADDRESSED-UTILITY & IMPACT IF OBJECTIVES ARE MET
- III. ANTICIPATED USERS OF TEST RESULTS
- IV. RECOMMENDED TEST DATE(S) (INCLUSIVE)/SCHEDULE MILESTONES
- v. SPECIAL REQUIREMENTS
  - A. HARDWARE
  - B. ENVIRONMENT
  - c. PERSONNEL
  - D. INSTRUMENTATION
- VI. SUGGESTED PARTICIPANTS (BY SERVICE , CINC , OR MAJOR COMMAND) (IDENTIFY LEAD AND PARTICIPATING SERVICES)
- VII. OUTLINE TEST CONCEPT
- VIII. FEASIBILITY STUDY OUTLINE AND PLAN OF ACTION AND MILESTONES
- IX. ESTIMATE OF FUNDS AND RESOURCES (BY FISCAL YEAR)
- x. KNOWN/PROJECTED RESOURCE SHORTFALLS
- XI. AGENCIES/ORGANIZATIONS/CINCS CONCURRING IN THIS NOMINATION (Coordination desired prior to nomination)
- XII. POINT OF CONTACT

Figure 1-1. Sample JT&E Nomination Format



## CHAPTER 2

### PROGRAM ADMINISTRATION

#### A. FUNDING RESPONSIBILITIES

The DoD Budget Guidance Manual (DoD 7I10-1-M), directs that:

the costs incurred are for the direction, supervision, and performance of JT&E and will be for those areas which are unique to the needs of the JT&E. In the accomplishment of Joint Tests, the Components will be reimbursed from these funds for those unique costs as defined in the Glossary of Terms. When directed as Executive Agent [Lead Service] for a particular JT&E, the Component will be responsible to the Secretary of Defense for ensuring that all resources necessary for the successful accomplishment of the JT&E are available to the JTD. This includes administrative management support and facilities for the JTD. The Components' support costs are to be programmed and budgeted for [in the Services accounts] in accordance with their established budgetary procedures.

This Manual defines unique Test and Evaluation costs as follows:

this refers to costs such as: feasibility determinations of proposed joint tests; the provision for test design and planning support for joint tests selected; the development, procurement, installation, and operation of special instrumentation; transportation, travel, and per diem costs for the Test Director's staff; the modification of test articles as surrogates and to permit obtaining test data; transportation of equipment from permanent bases to the test site and return; and the provision for data collection/collectors, data reduction, analysis, and test reporting services. Transportation and per diem of participating personnel and maintenance, and supply costs are not considered unique.

Thus, costs which are incurred solely as a result of conducting a JT&E and which cannot be regarded as providing long-term mission-oriented benefits (such as training or readiness) are normally funded by OSD. However, the precise line between costs which are the responsibility of one of the participating Services and costs which should be funded or reimbursed by OSD is not always easy to define.

Service funding normally pays for expenses necessary for the daily operations and maintenance of an activity. Among the items covered by Services Operations and Maintenance (O&M) funds are pay for civilian personnel, travel (for other than JT&E staff members), transportation, utilities and rents, service-owned equipment maintenance, supplies, printing and reproduction, and communications. O&M funds must generally be obligated (that is: come under legal obligation/owed) during the fiscal year for which they are appropriated but they do not have to be disbursed (that is, paid) in that same year.

Research, Development, Test and Evaluation (RDT&E) funds from OSD are appropriated for the support of research and development analyses; for the development, design, purchase, fabrication or modification of experimental, test, or

prototype articles; for the conduct of development test and evaluation and operational test and evaluation; and for the cost of specialized equipment, instrumentation, and facilities required to support research, development, and T&E activities. RDT&E funds may be obligated during both the fiscal year of appropriation and the next fiscal year. They are "two- year" funds.

B. SERVICE ORGANIZATIONAL FRAMEWORK TO SUPPORT JOINT TRST AND EVALUATION

1. Introduction

The type of management structure used by the Services to support the JT&E program varies within each Service and type of test program. In general, designated points of contact at the headquarters level in each Service assist in staffing joint test nomination and provide liaison on policy issues. Field level support is used to assist in the actual administration of the tests through the allocation of resources and participation in the test planning processes.

2. United States Army

a. Test Schedule and Review Process

The Test Schedule and Review Committee, established by the Army Chief of Staff, provides high-level centralized resource management for user testing in the Army. This centralized management maximizes the use of limited resources and minimizes the adverse impact on operational readiness.

b. Headquarters Level Responsibilities

Within the Office of the Deputy Chief of Staff for Operations and Plans (DCSOPS), the Force Developments Directorate is the point of contact for JT&E matters. Substantial working level interaction on JT&E matters takes place between ODCSOPS and the Operational Test and Evaluation Agency (QTEA). The ODCSOPS performs the following functions:

- (1) Staffs Army JT&E nominations;
- (2) Provides Army members to the JT&E Planning Committee and SAC;
- (3) Provides Army liaison to OSD on issues of JT&E policy and resources;
- (4) Coordinates on feasibility studies, test designs, and test plans;
- (5) Staffs nomination of Army JTD and DTD;
- (6) Staffs resource issues for JT&E;
- (7) Coordinates personnel allocations for JT&E; and
- (8) Coordinates on letters of instruction to Army JTD/DTD.

c. Field Level Responsibilities

OTSA is the Army's independent test agency, reporting to the Chief of staff. It is located in Falls Church, Virginia, and is the Army's center for user testing (operational T&E, JT&E, and force development test and experimentation). Within existing policy and resource constraints, OTSA has overall Army management responsibility for JT&E and is the Army point of contact with OSD for specific ST&Es. OTEA performs the following functions:

- (1) Staffs and prepares the Army position on test documents (feasibility studies, designs, and plans) ;
- (2) Recommends, for DCSOPS approval, Army JTD/DTD (drawn from Army-wide resources);
- (3) Recommends the Army proponent, i.e. , the organization responsible for providing doctrinal and technical expertise required to support the test;
- (4) Staffs the tasking of Army commands and agencies conducting or supporting JT&E; and
- (5) Prepares letters Of instruction for the Army JTD/DTD. (Outlines specific Army responsibilities, reporting channels within the Army, points of contact, and necessary administrative instructions. )

3. United States Navy

a. Chief of Naval Operations (CNO) Staff Level Responsibilities

The Navy point of contact for JT&E is located in the Office of the Director of Research, Development Requirements, Test, and Evaluation (OP-098) , specifically in the Test and Evaluation Division (OP-983). The JT&E point of contact is OP-983E which provides liaison with OSD on JT&E matters. However, for a specific test with Navy participation, OP-098 will normally nominate the appropriate CNO staff organization to act as the JT&E sponsor. In the CNO staff, the actions, responsibilities, and staffing locations are shared between OP-983E and a sponsor for each test with Navy participation. OP-98 is responsible for the following across-the-board JT&E actions:

- (1) Staffs Navy JT&E nominations;
- (2) Provides Navy members to the JT&E Planning Committee and SAC;
- (3) Providea Navy liaison to OSD on JT&E policy issues;
- (4) Coordinates/reviews feasibility studies, test designs, and test plans;
- (5) Is the initial Navy contact for all JT&Es; and
- (6) Staffs the selection of a sponsor from the CNO staff for each teat with Navy participation.

The sponsor for a particular JT&E reviews the feasibility study, test design, and test plan for each joint test; staffs the allocation of resources for the test; requests manpower billets; and requisitions personnel for the JTD/DTD and the JTF staff.

This system provides a team approach where the JT&E point of contact is knowledgeable concerning the entire spectrum of JT&E activity while the sponsor provides specific functional expertise to support individual tests.

#### b. Field Level Responsibilities

The Operational Test and Evaluation Force (OPTEVFOR) , the independent operational test agency for the Navy, reports directly to the CNO. The mission of OPTEVFOR is operational test and evaluation of specific weapon systems, ships, aircraft, and equipments, including procedures and tactics where required. OPTEVFOR is a valuable source of expert testing advice or assistance for a Navy JTD/DTD .

In contrast to the Air Force and Army where the responsible field agency has definite responsibilities and authorities related to JT&E, the Navy selects and delegates authority and responsibility on a case-by-case basis . Normally, the CNO staff sponsor will staff the selection of the field level lead Navy agency by the time the Navy JTD or DTD is approved. The JTD, whether Navy or from another Service, is provided the field level structure by the CNO staff sponsor.

#### 4. United States Air Force

##### a. Headquarters Level Responsibilities

The Headquarters , United States Air Force, point of' contact for JT&E is in the Deputy Chief of Staff/Plans and Operations (AF/XO) . The JT&E point of contact is the Operational Test and Evaluation Division (AF/XOORE) in the Air Staff.

When the JTD or DTD requires Air Staff action for personnel or resource allocations, the action officer is the primary staffing agent. Relationships among the Air Staff elements and between the Air Staff and elements in the field are documented in AFR 80-20 "Managing the Joint Test and Evaluation Programs. "

The Air Staff point of contact supports the JT&E program as follows:

- (1) Staffs Air Force JT&E nominations;
- (2) Provides Air Force members to the JT&E Planning Committee and SAC;
- (3) Services as interface with OSD on JT&E matters;
- (4) Coordinates on feasibility studies, test designs and test plans;
- (5) Staffs Air Force JTD nominations and DTD appointments and forwards them to OSD:

- (6) Staffs resource issues related to joint tests;
- (7) Coordinates personnel allocations for JTD/DTD and JTF staff positions;
- (8) Publishes Air Force test directives on Air Force participation;
- (9) Consolidates Air Force comments on JT&E test plans and forwards them to the JTD;
- (10) Informs field agencies of JT&E developments; and
- (11) Requests Air Force precedence rating in accordance with AFR 27-1.

**b. Field Level Responsibilities**

**(1) Air Force Operational Test and Evaluation Center (AFOTEC)**

Planning support and operational testing expertise related to joint testing are centered at AFOTEC, the USAF independent test and evaluation agency at Kirtland AFB, New Mexico. AFOTEC reports to the Chief of Staff and has a joint testing office (XPJ) which supports the Air Staff as follows:

- (1) Leads Air Force efforts in interfacing with the JTD during feasibility study and test design;
- (2) Participates in JTD and DTD nominations;
- (3) Provides a focal point for manpower and personnel support to the JTF;
- (4) Provides management guidance to Air Force JTDs/DTDs ;
- (5) Provides staff support to Air Force DTDs;
- (6) Assists Air Force JTD in staff organization and test plan development;
- (7) Provides JT&E resource estimates (documented in Joint Test Program Outlines--JTPO); and
- (8) Initially administers OSD funds when the Air Force is the Lead Service until the JTD's staff is established.

Additionally, the AFOTEC Directorate of Research Services maintains the JT&E Library consisting of charters, directives, test plans, test reports and visual information from completed JT&Es.

**(2) Major Commands (MAJCOMS) and Separate Operating Agencies (SOAs )**

The MAJCOMS (e.g. , the Tactical Air Command and the Strategic Air Command) and the SOAs provide most JT&E resources and personnel. Each MAJCOM and SOA maintains a permanent point of contact for joint testing. JTDs can obtain point of contact information from AF/XOORE or AFOTEC/XPJ. In general, the MAJCOMs and SOAs assist joint testing by:

(1) Supporting AFOTEC in interfacing with the JTD during test feasibility study and design;

(2) Programming resources against approved JTPOS;

(3) Providing personnel and equipment as tasked in the Air Force Test Directive;

(4) Tracking test-incurred costs (for provision to AFOTEC);

(5) Participating in nominations of the JTD/DTD; and

(6) Evaluating JT&E impacts on operational capabilities.

#### 5. United States Marine Corps (USMC)

Within the Marine Corps, the responsibility for liaison and coordination of JT&E matters is assigned to the Director for Test and Evaluation, Marine Corps Research and Acquisition Command (MCRDAC). MCRDAC(T&E) supports the JT&E process by soliciting USMC/JT&E nomination and providing USMC liaison to OSD on issues of JT&E policy. The USMC sponsor for a particular JT&E is selected from either MCRDAC for developmental JT&Es or the Marine Corps Operational Test and Evaluation Activity (MCOTEA) for operational JT&Es. The USMC sponsor supports the JT&E by providing JTD/DTD nominations and recommending Fleet Marine Force units to meet the requirements of the JTD. For JT&E, MCRDAC and MCOTEA perform the following functions:

(1) Staff the USMC position on feasibility studies, test designs, and test plans;

(2) Recommend to the Commandant the selection and tasking of the Fleet Marine Force for conduct or support of JT&E;

(3) Provide technical support to USMC JTD/DTD in test planning, direction, and reporting;

(4) Publish Test Planning Document for USMC participation; and

(5) Conduct an independent evaluation if required.

#### 6. Interservice Agreement on JT&E

The commanders of the independent test agencies of the Services (OTEA, OPTEVFOR, AFOTEC, and MCOTEA) have executed a Memorandum of Agreement (MOA) on Multi-Service OT&E and JT&E. This memorandum is reviewed and updated annually. It provides guidelines for planning, conducting, evaluating, and reporting of T&E involving two or more OT&E agencies. The memorandum:

(1) Outline the relationships between the lead Service and the participating Services, and lists their duties and responsibilities;

(2) Provides for the coordinated development by all participating Services of a Joint Consolidated Resource Estimate;

(3) Outlines funding responsibilities;

(4) Lists the steps the test agencies will take to properly implement DoD Directive 5000.3 and to facilitate the JT&E program; and

(5) provides a recommended test team structure.

#### 7. The Joint Staff

The Joint Staff point of contact for JT&E is J-7. J-7 is responsible for maintaining cognizance of all JT&Es and has action responsibility for all JT&E matters within the Joint Staff. Specific JT&E-related activities of J-7 of the Joint Staff include the following:

(1) Staffs JT&E nominations from the Joint Staff and the CINCs of the Unified and Specified Commands ;

(2) Staffs JT&E nominations from other DoD organizations when joint missions or doctrines are involved;

(3) Provides Joint Staff members for the JT&E Planning Committee and SAC ;

(4) Facilitates integration of JT&Es into joint exercises; and

(5) Assists in incorporating JT&E results into joint operations.

#### C. RESPONSIBILITIES OF PRINCIPAL PARTICIPANTS

##### 1. Overview

Summaries of the JT&E responsibilities of the following entities are provided in this section:

(1) Deputy Director, Defense Research and Engineering (Test and Evaluation),

(2) Director Operational Test and Evaluation,

(3) The Joint Staff,

(4) Senior Advisory Council,

(5) Joint Test Director,

(6) Deputy Test Director,

(7) Services,

(8) JT&E Planning Committee,

(9) Support Agent,

(10) Technical Advisory Board, and

(11) Technical Advisory Group.

2. Deputy Director, Defense Research and Engineering (Test and Evaluation)

The DDDRE(T&E) has overall responsibility for the administration of JT&E programs. In coordination with DOT&E, the Joint Staff and the Services, the DDDRE (T&E) selects the JT&E that will be conducted. DDDRE (T&E) responsibilities include the provision of funds for items unique to JT&E such as feasibility studies, test designs, data management, and instrumentation and other physical assets peculiar to JT&E. Specific DDDRE(T&E) responsibilities include: .

- (1) Solicit nominations for JT&Es;
- (2) Co-chair the JT&E SAC;
- (3) Provide a chairman for the JT&E Planning Committee;
- (4) Establish overall policy and direction for the JT&E program;
- (5) Prepare plans, programs, and budgets for each JT&E;
- (6) Select JT&Es (in coordination with DOT&E, the Joint Staff and the Services);
- (7) Charter JT&Es;
- (8) Appoint the lead Service and participating Services for each JT&E;
- (9) Appoint and charter the JTD;
- (10) Appoint the DTDS;
- (11) Fund costs unique to JT&E (in accordance with DoD Budget Guidance Manual 711 O-I-M) ;
- (12) Approve feasibility studies;
- (13) Approve test designs (in coordination with the Joint Staff and the Services) ;
- (14) Approve the Test Plan(s) (after coordination by the Services); and
- (15) Control and administer DDDRE(T&E) joint test property and special equipment, directing its location, assignment, and use.

3. Director, Operational Test and Evaluation

The DOT&E participates in the JT&E nomination and approval process. Specific DOT&E responsibilities include:

- (1) Co-chair the JT&E SAC;
- (2) Provide a permanent member for" the JT&E Planning Committee;



(3) Select JT&Es (in coordination with DDDRE(T&E) , the Joint Staff and the Services) ; and

(4) Approve Test Plans for operational tests .

#### 4. The Joint Staff

Since JT&Es are by definition related to joint operations, the Joint Staff plays a key part in the operation of the JT&E program, especially those tests involving alternative concepts , organization, tactics , or procedures . The Joint Staff evaluates JT&E nomination related to joint doctrine or mission, assesses the potential impact of nominated tests , coordinate the JT&E program with joint exercises , and assists in applying joint test results . Specific Joint Staff responsibilities include the following:

(1) Provide a permanent member for the JT&E SAC;

(2) Provide a permanent member for the JT&E Planning Committee;

(3) Encourage the Commanders-in-Chief (CINCs ) of the Unified and Specified Commands to nominate JT&Es relevant to their operational responsibilities;

(4) Receive and review all nominations from the CINCs;

(5) Receive and review nominations from the Services, the Defense Agencies, and OSD concerning joint doctrine or mission;

(6) Review all nominations , assign priorities, and forward with comments to the DDDRE (T&E);

(7) Identify the Unified and Specified Commands that would be the users of the results of nominated JT&Es and assess the potential impact of the results on joint operations;

(8) Identify opportunities and make recommendations for the integration of JT&Es into joint exercises;

(9) Monitor the activities of JT&E staffs during the development of feasibility studies and test designs ; and

(10) Review test reports and assist in incorporating the beneficial results of JT&Es into joint operations.

#### 5. Senior Advisory Council

The SAC is a senior-level group that advises on JT&E matters by reviewing the JT&E Planning Committee recommendations on JT&E nominations, feasibility studies, and progress of ongoing JT&Es . It considers the impact on the Services of the proposed JT&Es and formulates recommendations on the feasibility and desirability of the nominations. The SAC meets annually and/or at the call of the Chairmen. Figure 2-1 lists the membership and responsibilities of the SAC.

## 6. Joint Test Director

The lead Service nominates a JTD and sends to the DDDRE (T&E) a package containing the candidate's name and rank, a summary of his Service record, and any supplemental information that identifies his relevant qualifications and substantiatea the nomination.

The JTD is chartered to lead the execution of a JT&E. During the feasibility study period, he may be involved as a representative of the lead Service in preparation of the feasibility study and the preliminary test design. During the charter period, he is responsible for executing the test in such a way that the detailed test design is followed and the objectives are met, for publishing reports, and for encouraging the adoption of the results. He is responsible for the management, supervision, and direction of all JT&E activities and responsibilities.

During the charter period, the JTD is tasked to:

- (1) Establish, organize, direct, and supervise a functionally effective JT&E ;
- (2) Lead, manage, and supervise all facets of the JT&E;
- (3) Ensure that the test is conducted so that it accomplishes the specified test objectives;
- (4) Develop plans to guide the test (e.g. , Final Test Design, Field Test Plan, Instrumentation Plan, Data Management Plan, Simulation Plan, Evaluation Plan, Logistics Support Plan);
- (5) Develop, maintain, and update requirements for OSD funding and for Service support; submit them to the DDDRE(T&E) and the Services as appropriate;
- (6) Control funds specifically designated for JT&E activities and account to the DDDRE(T&E) for their use;
- (7) Monitor Service expenditures related to the JT&E;
- (8) Coordinate the use of required resources (e.g. , forces, weapon systems, and simulations) and facilities (e.g. , range and maneuver areas, test beds, and computers) ;
- (9) Manage the acquisition and control of JT&E-funded resources used in the test;
- ( 10) Coordinate the integration of the JT&E into joint exercises when possible and appropriate;
- ( 11) Lead the data-generating field trials, war games, and simulations; collect and validate the data;
- (12) Prepare summary statistic and brief the preliminary results;

(13) Analyze the data and evaluate the results; prepare and submit interim and special reports as appropriate; prepare and submit a Final Test Report and a JTD Management Report; and

(14) Present the results to the users and assist in incorporating the results into developmental and operational activities.

#### 7. Deputy Test Director

Each participating Service in a chartered JT&E will nominate and provide a DTD. The nomination and appointment process for a DTD is similar to that for a JTD. The Service will send to the DDDRE(T&E) a package containing the candidate's name and rank, a summary of his Service record, and any supplemental information that identifies his relevant qualifications and substantiates the nomination. The DDDRE (T&E) ' a review and approval of the nomination will usually include consultation with the JTD, who should be kept informed by the participating Service throughout the nomination process.

The primary responsibility of a DTD is to support the JTD in the overall direction and management of the test. He may also act as a functional director of one of the key organizational elements , such as Director of Plans and Operations, Director of Data Management, or as overall Deputy to the JTD.

At the same time, a DTD functions as the senior representative of and spokesman for his Service. In this capacity, he:

(1) Provides Service-specific expertise in resolving technical, personnel and administrative problems related to his Service;

(2) Oversees the performance evaluation process for all personnel from his Service to assure that ratings are representative of the performance;

(3) Provides advice and expertise to the JTD on specific Service issues and areas of interest;

(4) Acts as a focal point for arranging Service support necessary for test implementation; and

(5) Provides test progress and significant action reports to his Service on a continual basis.

When the time comes for replacement of a JTD or a DTD, the process must be similar to that for initial appointments. The Services will submit nominations to the DDDRE (T&E) with a Service record summary and appropriate supplemental information for review, approval, and appointment. The incumbent JTD will be kept informed during this process.

#### 8. Services

##### a. General Responsibilities to Support the OSD JT&E Program

The Services are responsible to the DDDRE (T&E) for supporting the JT&E program. They are active throughout the nomination, selection, and

assignment process. In addition, they plan, program, and provide necessary resources and funds not provided by the DDDRE (T&E) to support the JT&E. Ordinarily, each Service with an interest in the subject of a particular JT&E will be a participating Service in that test and will be involved in the planning, execution, and reporting Of the test. A participating Service can also take advantage of the opportunity provided in a JT&E to add related issues of a Service-specific nature and to conduct a separate evaluation of the data.

Specific responsibilities for each Service in support of the overall JT&E program include the following:

- (1) Provide a permanent member for the JT&E SAC;
- (2) Provide a permanent member for the JT&E Planning Committee;
- (3) Provide a permanent member for the TAB;

(4) Designate a unit or agency within the Service responsible for Service coordination; and

(5) Identify areas that would benefit from JT&Es and submit JT&E nominations annually in response to the DDDRE(T&E) call.

b. Specific Responsibilities to Support a Particular JT&E

Specific responsibilities of each participating Service for a particular JT&E include the following:

(1) Act as lead Service, when so designated (see paragraph 8c below for a more complete description of lead Service responsibilities);

(2) Designate a primary point of contact within the Service;

(3) Participate in the preparation of the feasibility study and the preliminary test design;

(4) Nominate and provide a DTD;

(5) Provide qualified personnel to staff the JTF;

(6) Provide a member or members for the Technical Advisory Group;

(7) Identify special Service requirements for data or special test events which may be incorporated in the JT&E;

(8) Program and provide appropriate Service funds and resources to conduct the JT&E;

(9) Provide Service doctrine, tactics, and procedures;

(10) Designate and provide the units required for participation in the test;

(11) Procure and/or modify test items, systems, equipment, and instrumentation as requested by the JTD and coordinated with the Service;

(12) Conduct a separate evaluation of test data, if desired; and

(13) Review test reports and ensure incorporation of the beneficial results into Service operations.

c. Lead Service Responsibilities

One of the participating Services of a JT&E is designated the lead Service. In addition to the other responsibilities of a participating Service, the lead Service nominates and provides the JTD and is responsible for ensuring that the JTD has available all resources necessary for the successful administration and completion of the JT&E. These include the personnel necessary to staff the JTF, as well as appropriate Service resources required for conducting the test. During the feasibility study period of a JT&E, and during the start-up activities of a chartered test, the lead Service must provide administrative support to the JTD until an operating support staff within the JTF has been established. Specific responsibilities for the lead Service, in addition to those for all participating Services, include the following:

(1) Nominate and provide the JTD; and

(2) During the feasibility study and the start-up stage of a chartered test, provide the JTD and his staff with office space and related facilities (communication, document reproduction, security, etc.) along with administrative services and assistance in areas such as secretarial support, preparation of travel orders, contracting, personnel administration, funds control and accounting, and supply and logistics

9. JT&E Planning Committee

The JT&E Planning Committee is a working group that assists in developing and evaluating JT&E nominations, and preparing them for senior-level review. The Planning Committee chairman is the ADDRE (T&E/SP), and its permanent membership is drawn from OSD, the Joint Staff and the Services. Nonpermanent members are from agencies submitting JT&E nominations. All of the members coordinate and interface with their respective Services and agencies; to function effectively they must have authority to speak for their organizations. The Services and agencies may send additional personnel to provide information and/or assistance at meetings. JT&E Planning Committee meetings are usually held annually and/or at the call of the chairman. The chairman and the committee members are the action staff for the SAC. Figure 2-2 lists the membership and responsibilities of the JT&E Planning Committee.

10. Support Agent

A support agent is an organization that provides technical and analytical assistance to the JT&E, particularly in the development of the feasibility study and the test design and in the preparation of the report. The support agent is often a Federally Funded Research and Development Center (FFRDC), but it may be a DoD organization or a qualified contractor. The selection of the support agent for a particular JT&E is preferably made by the JTD in coordination with the OSD sponsoring agency; alternatively, the selection may be made by the sponsoring agency. The support agent receives guidance from and is responsive to the JTD.

## 11. Technical Advisory Board

The JT&E TAB is an organization of high-level civilian scientists and engineers drawn from the Services to advise the JT&E SAC, the OSD sponsors, and the JTDs on technical issues related to the JT&E program in general and each JT&E in particular. The members of the TAB are persons who have current knowledge, experience, and/or responsibility for advising their own Services in the design, planning, conduct, and evaluation of large-scale tests, exercises, and simulations, and who can assist in solving the technical problems associated with such activities. In addition to providing advice on JT&E nominations, the TAB monitors current JT&E activities and assists in defining common technical elements among joint tests, maximizing the costs associated with JT&Es, and preserving for future use significant residual technical assets developed in conjunction with JT&Es. The Services and OSD are requested to nominate qualified individuals for the TAB. The OSD sponsors of JT&E then confer with the Services to select the members. Figure 2-3 lists the membership and responsibilities of the TAB.

## 12. Technical Advisory Group (TAG)

A TAG may be formed for a particular JT&E sometime after the charter is issued. It is comprised of individuals from the Services (usually senior civilians) having technical proficiency particularly suited to the test. TAG members may be nominated by the TAB, requested by name by the JTD, or suggested from other sources. They are appointed in writing by the DDDRE (T&E) after coordination with the participating Services, each of which provides one or two members. The TAG is not a permanent full-time part of the JTD staff. It meets at the call of the JTD and provides assistance to the JTD, either collectively or by action of individual members, as appropriate. Specific responsibilities of the TAG include the following:

- (1) Review and comment on plans, analyses, and reports;
- (2) Assess appropriateness and output of simulations suggested or developed for the test;
- (3) Identify sources of technical assistance (e.g., Service analysis agencies; qualified contractors) and provide technical liaison with them;
- (4) Provide the TAB with information useful in fulfilling its responsibilities; and
- (5) Provide the JTD with other advice and assistance as required.

## 13. Defense Test and Evaluation Support Agency (DTESA)

DTESA was established to promote efficiency in JT&Es and provide the required accountability for all equipment purchased with DDDRE (T&E) funds. DTESA is a DDDRE (T&E) support organization with both the capability and resources (of office, computers, instrumentation, and threat replication) to provide quick and efficient start-up, planning, data-collection, and analysis for joint tests during the feasibility study phase and chartered JT&E period. DTESA, located at

Kirtland AFB, NM, accomplishes this mission through in-house expertise and contractual support. DTESA has its own contract authority and contracting officers which permits efficient response to JT&E contracting requirements . Equipment accountability is accomplished through an inventory system which catalogs DDDRE(T&E) owned assets and msintains master hand-receipts and Memorandums of Agreement for equipment on loan. All equipment purchased by a JT&E with OSD funds will be registered with DTESA and maintained on their property logs .

DTESA should be the first point of contact for new tests They can be of assistance with loans of equipment (office furniture to computers) , contracting office support, and basic Test and Evaluation capability for the new JT&E. Work-load at DTESA is controlled through the Program Initiation Document (PID) which outlines the scope of the effort, and estimates duration and funding. Approval authority for PID' s is the DDDRE(T&E) .

SENIOR ADVISORY COUNCIL

Permanent Members: Co-chairmen: DDDRE (T&E) and DOT&E

One member from the Joint Staff.

One member from each Service.

One member from the OSD Program Analysis and Evaluation (PA&E )

One member from the Office of the Deputy Under Secretary of Defense (Tactical Warfare Programs) .

Members from other OSD agencies if appropriate.

Executive/Advisor: Chairman of the JT&E Planning Committee.

Nonpermanent Members: One representative from each agency submitting JT&E nomination, as applicable.

Responsibilities:

1. Recommend JT&Es to be conducted as part of the JT&E program presented by the JT&E Planning Committee.
2. Establish priorities and schedules of JT&Es to be conducted.
3. For each selected JT&E review:
  - a. Preliminary test concepts and objectives.
  - b. Feasibility of test.
  - c. Impacts of resource requirements.
  - d. Planned budget level of OSD funds
  - e. Selection of Lead Services and Participating Services.
  - f. Impacts of anticipated results on joint operation.
  - g. Opportunities for JT&Es to be incorporated into joint exercises.
4. Recommend next N starts.
5. Review and recommend JT&E management and policy changes.
6. Review JTD Final Test Report.

Figure 2-1. Membership and Responsibilities of the Senior Advisory Council



## JT&E PLANNING COMMITTEE

### Permanent Members:

Chairman: ADDRE(T&E/SP)

One representative from DOT&E.

One representative from the Joint Staff

One representative from each Service.

One representative from OSD PA&E

### Nonpermanent Members:

One representative from each agency submitting nominations for consideration.

### Responsibilities:

1. Receive JT&E nominations for DDDRE (T&E).
2. Review nominations to:
  - a. Initially determine feasibility.
  - b. Identify duplication and possible consolidation.
  - c. Determine adequacy of data and details of nominated JT&E,
3. Review, refine, and validate objectives, data and details of nominated tests and endorse desirability and feasibility of nominated tests
4. Recommend to the SAC JT&Es to be conducted by priority.
5. Act as action staff for the SAC.
6. Coordinate:
  - a. Preliminary test concepts with nominating Service/Agency.
  - b. Schedules of nominated tests.
  - c. Integration of test schedules into joint exercise schedules.
7. Chairman, JT&E Planning Committee will be executor and nonvoting member of the SAC.

Figure 2-2. Membership and Responsibilities of the JT&E Planning Committee

## TECHNICAL ADVISORY BOARD

Permanent Members: Four civilian scientists (one each from the Army, Air Force, Navy, and Marine Corps)

Chairman: Rotated periodically among permanent members

### Responsibilities:

1. Provide technical recommendations to the SAC concerning JT&E nomination, feasibility studies, and test designs.
2. Assist in defining common elements among joint tests, maximizing the possibility of resource sharing, minimizing the costs associated with JT&Es, and preserving for future use significant residual assets developed in conjunction with JT&Es. The resources and assets of concern in these activities are primarily (but are not limited to) scenarios, databases, computer simulations, algorithms, test facilities, instrumentation, and threat simulators.
3. Recommend personnel to staff the TAG created for a JT&E, if required.
4. Provide technical advice on other matters as required.
5. The Chairman of the TAB may serve as a technical advisor and nonvoting member of the SAC.

Figure 2-3. Membership and Responsibilities of the Technical Advisory Board

## CHAPTER 3

### FEASIBILITY STUDY

#### A. INTRODUCTION

The feasibility study is directed by the DDDRE(T&E) upon recommendation of the SAC to provide a basis for a decision to proceed with the full charter for the JT&E. The importance of a thorough, well defined feasibility study cannot be understated. It is the cornerstone upon which the framework for a successful joint test is laid.

The feasibility study may be conducted in a number of ways depending upon the maturity of the JT&E nomination.

(1) The nomination may be for a test that is already established at some level within one or more of the Services. Rather than set up a redundant team to conduct the feasibility study, the existing team may be augmented as required with personnel from the Services. OSD would then provide an independent review of the study and its results.

(2) The lead Service may desire to establish a team within itself and the participating Services based upon the Services' expertise in the nominated field. OSD would again provide an independent review of the study and its results.

(3) OSD may develop the feasibility study through a FFRDC or independent contractor with the Services participating.

(4) In rare cases, the nomination may be so well developed so as not to require a feasibility study. That is, the nomination is able to answer the questions normally posed through a feasibility study and the SAC recommends that the JT&E proceed immediately to a test design phase.

#### B. REQUIREMENTS OF A FEASIBILITY STUDY

The feasibility study forms the basis for the informed commitment by the DDDRE(T&E) to fund the proposed JT&E. Guidelines for the preparation of the feasibility study are provided in Figure 3-1.

The first concern of a feasibility study is to determine whether or not a joint test is required in order to answer the issues proposed. The problem to be addressed needs to be a joint problem with a joint solution. The primary focus is on joint areas that affect two or more Services rather than those that a single Service can or should address. The simple fact that the nomination was accepted for a feasibility study does not determine de facto that a JT&E is warranted.

Should the feasibility study reach the conclusion that a joint test is required, it must then prove that it is feasible. Feasibility is a function of requirements, cost, schedule, test design, and a determination with proof that the joint test can be conducted within the resources available to the Services and OSD. For instance, if the test assets required to conduct a

successful joint test are not available, affordable, or within the state of the art, the joint test may not be feasible. The feasibility study must approach these conclusions in an objective, unbiased manner.

The format of the feasibility study is not fixed, but it must describe the test concept, the test objectives, and the test issues. It must also include a preliminary schedule and an estimate of the funds, Service support, and other resources required. Detailed definition of the results to be expected from the JT&E and the benefit to the DoD is a major product of the feasibility study.

In definition of the test objectives, the feasibility study must proceed from the general objectives that are characteristic of the JT&E nomination to specific objectives that are related to the specific issues to be addressed by the test. The issues and objectives must be agreed to by the participating Services and agencies. This concurrence indicates that all parties believe that the test has utility and that it is capable of being completed successfully, within schedule and budget. The planning process must address the tradeoffs between objectives and issues on the ideal side and schedule and resources of the realistic side to achieve a JT&E that is realistic, achievable, and affordable.

Developing the test schedule and budget requires a realistic view toward the usual test problems that affect schedule and cost. JT&Es are afforded high visibility by the Congress and Comptroller staffs so that the initial inputs to the biennial budgets become sacrosanct. Any changes are highly visible and far more subject to budgetary cuts than a Service program of the same magnitude. Stretchout of the test schedule and budgetary increases tend to be viewed as failure or indications of a problem no matter how valid the driving factors. Test schedules must have the appropriate contingencies built in to account for the problems of software development and the dependencies of piggybacking upon the Joint Staff and Service tests and exercises. Resource assessments must account for potential growth and contingency with positions without gold plating the test. The first estimate of schedule and resources frequently becomes the yardstick against which success or failure of the test is measured.

## FEASIBILITY STUDY GUIDELINES

The feasibility study should at a minimum:

1. Determine the requirement for and feasibility of a joint test
2. Develop concise well-defined test objectives and subobjectives
3. Develop measures of effectiveness/performance (MOE' s/MOP's)
4. Complete a literature search
5. Identify test limitations and drivers, i .e. , assumptions and controlled and uncontrolled variables
6. Develop a preliminary test design
7. Identify resources required - by Service
  - a. Equipment (the type and timeframe when needed)
  - b. Ranges
  - c. Facilities
  - d. Instrumentation
  - e. Threat simulators
  - f. Simulations/models
  - g. Data collection, processing, and analysis requirements
  - h. Personnel - structure of JTD or organization
  - i. Administrative Support
    - (1) Contracting
    - (2) Finance
    - (3) supply
    - (4) Travel
8. Provide a cost estimate by major areas
9. Develop a budget estimate by year
10. Identify contracts required" by type
11. Compile a preliminary data management plan
12. Develop a preliminary test schedule with milestones
13. Identify the user of the information and how the test results will be used

The results of the feasibility study should be presented aa follows :

- (1) Staff results with the Services and users prior to presenting to the SAC ,
- (2) Provide a decision briefing to the SAC, and
- (3) Provide a written report with executive summary that addresses conclusions and recommendations.

Figure 3-1. FEASIBILITY STUDY GUIDELINES